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EXAMINER

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ART UNIT PAPER NUMBER

2317

3

DATE MAILED: 01/25/93

 This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

 A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133
**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-848.                   |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.                 | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____  |

**Part II SUMMARY OF ACTION**

- 1.
- ☒
- Claims
- 1-36
- are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

- 2.
- ☐
- Claims \_\_\_\_\_ have been cancelled.

- 3.
- ☐
- Claims \_\_\_\_\_ are allowed.

- 4.
- ☒
- Claims
- 1-27, 29, 31-36
- are rejected.

- 5.
- ☒
- Claims
- 28, 30
- are objected to.

- 6.
- ☐
- Claims \_\_\_\_\_ are subject to restriction or election requirement.

- 7.
- ☐
- This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

- 8.
- ☐
- Formal drawings are required in response to this Office action.

- 9.
- ☒
- The corrected or substitute drawings have been received on
- 2/19/92
- . Under 37 C.F.R. 1.84 these drawings are
- ☒
- acceptable.
- ☐
- not acceptable (see explanation or Notice re Patent Drawing, PTO-848).

- 10.
- ☐
- The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been
- ☐
- approved by the examiner.
- ☐
- disapproved by the examiner (see explanation).

- 11.
- ☐
- The proposed drawing correction, filed on \_\_\_\_\_, has been
- ☐
- approved.
- ☐
- disapproved (see explanation).

- 12.
- ☐
- Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has
- ☐
- been received
- ☐
- not been received
- 
- ☐
- been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_

- 13.
- ☐
- Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

- 14.
- ☐
- Other

EXAMINER'S ACTION

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1. Claims 34-36 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 34 and 36, "said means" is vague and indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

2. Claims 1-16 and 18 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

An invention may be patented only if it falls within one of the four statutory classes of subject matter of 35 U.S.C. 101. Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 483, 181 USPQ 673, 679 (1974). The CCPA stated that "any process, machine, manufacture, or composition of matter constitutes statutory subject matter unless it falls within a judicially determined exception of section 101". In re Pardo, 684 F. 2d 912, 916, 214 USPQ 673, 677 (CCPA 1982). The claims are directed to non-statutory subject matter because the claimed subject matter:

(A) does not fall within any of the four statutory classes of 35 U.S.C. 101; and/or

(B) falls, by analogy, within the printed matter exception to 101 or within a new exception to computer programs per se.

(A) In order to determine if the claimed invention falls within any of the four statutory classes, one must determine if the mere labeling by the preamble is sufficient to allow the claim to pass muster. The applicant has attempted to categorize his invention into one of the statutory classes by merely labeling the invention in the preamble as a digitized image processing system. However, it is clear that the body of the claim is directed to computer program and not directed to a computer implemented process or apparatus since no computer is claimed. The claims are not directed to a computer implemented process, i.e., to a series of steps performed by a computer, which processes were held by the CCPA to constitute statutory subject matter unless within a judicially determined exception to 101. See "Patentable Subject Matter -- Mathematical Algorithms and Computer Programs", 1106 Off. Gaz. Pat. Office 5, 10-11 (Sept. 5, 1989); In re Gelnovatch, 595 F. 2d 32, 44, 201 USPQ 136, 147 (CCPA 1979) (what is usually at issue "is not the 'program' i.e., the software, but the process steps that the software directs the computer to perform"); In re Johnson, 589 F. 2d 1070, 1081, n. 12, 200 USPQ 199, 210 n. 12 (CCPA 1978). Instead, the claims are expressly directed to a computer program or "software" intended to run on a computer, albeit claimed in functional terms as "program means for" rather than as lines of code, which may or may not be associated with structure.

Non-Statutory subject matter cannot be automatically converted into statutory subject matter merely by broadly labeling the claim as a "digitized image processing system" or by drafting the claims with token references to something that is statutory subject matter, such as "computer usable medium"; this form of draftsmanship would amount to elevating form over substance.

The limitations in the preamble generally are not entitled to patentable weight. DeGeorge v. Bernier, 768 F. 2d 1318, 1322 n. 3, 226 USPQ 758, 761 n. 3 ("Generally ... the preamble does not limit the claims."); In re de Castelet, 562 F. 2d 1236, 1244 n.6, 195 USPQ 439, 446 n.6 (CCPA 1977) ("The potential for misconstruction of preamble language requires that compelling reason exist before that language may be given weight."). Here, the bodies of all claims recite only "program means" and do not refer to or modify any structure in the preamble. Thus, the preambles are not entitled to any patentable weight in the 101 determination.

In this analysis, a parallel may be drawn to the inquiry used in determining whether a claim having a mathematical algorithm is directed to non-statutory subject matter or to a statutory process. See In re Abele, 684 F. 2d 902, 907, 214 USPQ 682, 687 (CCPA 1982): "The goal is to answer the question "What did applicants invent?" Here, the claim preamble recitations are

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so broad that it is manifest that the invention sought to be patented is the "program means" (really, the computer program itself).

(B) This leads to the second determination which is whether the "program means" is considered to be statutory subject matter.

I. The claimed invention is directed toward nonstatutory subject matter under the printed matter exception to 35 U.S.C. § 101.

The limitations in the preamble generally are not entitled to patentable weight. DeGeorge v. Bernier, 768 F. 2d 1318, 1322 n. 3, 226 USPQ 758, 761 n. 3 ("Generally ... the preamble does not limit the claims.")' In re de Castelet, 562 F. 2d 1236, 1244 n.6, 195 USPQ 439, 446 n.6 (CCPA 1977) ("The potential for misconstruction of preamble language requires that compelling reasons exist before that language may be given weight.")

Here, the bodies of the claims recite "program means" and do not refer to or modify any structure in the preambles. Thus, the preambles are not entitled to any patentable weight in the § 101 determination.

Printed matter by itself is nonstatutory. In re Miller, 418 F. 2d 1392, 1396, 164 USPQ 46, 59 (CCPA 1969). "Program means," like printed matter, has no distinct structure itself, but is only representative of a type of information; by analogy to printed matter, such abstractions from physical method steps or

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apparatus are not deemed to be patentable subject matter.

Claims drawn to printed matter may be non-statutory even though the claims recite the structure on which printed matter is printed. See In re Russell, 48 F. 2d 668, 669, 9 USPQ 181, 182 (CCPA 1933):

The mere arrangement of printed matter on a sheet or sheets of paper, in book form or otherwise, does not constitute "any new or useful art, machine, manufacture, or composition of matter," or "any new and useful improvement thereof," as provided in section 4886, of the Revised Statutes [the predecessor to 35 U.S.C. 101].

As established above, when "program means" is given its broadest reasonable interpretation the language reads directly on mere characters on paper. For this reason alone the claims are nonstatutory under the printed matter exception.

II. The claimed invention is directed toward nonstatutory subject matter by analogy to the printed matter exception to 35 U.S.C. § 101.

Applicant would like to avoid the claims being interpreted to be nothing more than characters printed on paper. Even if the claim was amended or interpreted to avoid a reading of the claims on mere characters on paper, however, the claims would still be nonstatutory by analogy to the printed matter exception.

The classic example of printed matter is characters printed

on paper. Such charters on paper are considered an original work of authorship, which is often protected by copyright. A typical work of authorship is a computer program in the form of symbols of a computer program on paper.

Copyright has recognized that original works of authorship may be fixed in a variety of tangible mediums of expression, and the purpose of protecting the work under copyright should not be thwarted by merely altering the tangible medium. This principle is embodied in 17 U.S.C.A. § 102:

"(a) Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device."

Patent law does not protect mere works of authorship. Therefore, just as copyright has recognized that copyright protection should not be circumvented by merely providing the work on another tangible medium, patent law should not protect, without more, mere works of authorship on differing tangible mediums.

This is not to say that a patent may not issue which includes a work of authorship, only that it must be more than a mere work of authorship on a tangible medium.

If the tangible medium merely fixes printed matter, and

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there is no new functionality demonstrated, then the tangible medium functions as that tangible medium functions with respect to most other printed matter thereon. That is, there is no other function other than an expressive purpose to have a pattern on a tangible medium, or substrate.

Even if the present claims merely require a "computer readable" and "computer usable" medium, there is a pattern written on the medium which is referred to in the claims as "program means." The claims provide a description of what the patterns on the computer usable medium would mean to a computer. The functions described are not performed.

Without more, this claim language merely describes abstractions fixed in a tangible medium, which is nothing more than printed matter. In substance, a description of these patterns on a tangible medium is indistinguishable from a description of printed matter on paper. By analogy to copyright, the printed matter exception to 35 USC 101 should not be thwarted by the mere form of tangible medium.

Therefore, the claims should be held nonstatutory by analogy to the printed matter exception to 35 USC 101.

III. Computer programs should not be an exception to the § 101 printed matter exception.

Applicant goes to great lengths to lend a concept of "structure" to the program written on the computer usable medium.



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Such programs, however, have no more "structure" than any other printed matter which has been held to be nonstatutory.

The courts have uniformly denied patentability of claims directed toward mere descriptions of printed matter fixed in a tangible medium. In each case, applicant had to demonstrate this new functional relationship.

Program means on a computer usable medium, separate from the computer, is merely a blueprint of abstract ideas in program form UNTIL interpreted by the computer. Blueprints, a form of printed matter, are not patentable - they are merely guidance from which a patentable device may be developed when the information from the blueprint is taken from the blueprint and implemented.

Analogies can be drawn from other nonstatutory subject matter. For example, abstract ideas have always been held nonstatutory. A claim directed toward the abstract idea of a digitized image processing system would be nonstatutory, even though the abstract idea is used in implementing the statutory digitized image processing apparatus.

To merely describe the abstract idea in terms of patterns on a medium which could be used and interpreted by a computer should not save the claim.

By analogy, printed matter in a statutory process or apparatus should not be considered statutory separate from the process or apparatus.

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3. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to adequately teach how to make and/or use the invention, i.e. failing to provide an enabling disclosure.

Applicant has used means plus function language, as allowed under 35 USC 112, sixth paragraph. Such language is interpreted to cover "the corresponding structure, material, or acts described in the specification and equivalents thereof [for performing the recited function]."

The claims only recite a computer program. Applicant has not disclosed how a mere computer program without more, can carry out the functions recited in the means plus function language.

As noted above, the bodies of the present claims are comprised of means: program means for causing a function to be performed.

The applicant has not disclosed how a program alone without the use of the computer can perform the claimed functions.

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Program means without more, is incapable of function without being read and interpreted by a computer.

Claims 1-16 and 18 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

4. Claims 1-16 and 18 are rejected as unpatentable under 35 U.S.C. 103 over the well-known data processing technique of storing "program means" on storage media for later use by a computer.

Official notice is taken that computer programs comprising "program means" are commonly "recorded" or stored on an "article of manufacture" or on "a computer usable medium". This finding is supported by the fact that applicants' specification does not describe any article of manufacture or computer usable medium, but relies for enablement on what is common and well-known to persons skilled in the art.

5. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102

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of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

6. Claims 1-27, 29 and 31-36 are rejected under 35 U.S.C. § 103 as being unpatentable over Pfeiffer et al. (4,985,848) in view of Baumeister et al. (4,675,755).

As per claim 1, Pfeiffer et al. teaches a plurality of image memories (82); an video image transducer (10); digitizer and mass data storage (18); a monitor (28); a video image computer (22) comprises host interface (64); image algorithm processor (66); image memory controller (68); parallel image processor (72); video processor (106); image system controller (50) comprises a memory manager (56); floating point processor (58); DRAM (60) and PROM (62). However, Pfeiffer fails to explicitly teach program means for selecting image data files and storing the image data in detail. This is what Baumeister et al. teaches (Fig. 1). It would have been obvious to one of ordinary skill in the art to combine the teaching of Baumeister into image processing system of Pfeiffer in order to obtain the advantage for a video disk apparatus. Therefor claim 1 reads on Pfeiffer and Baumeister.

As per claim 2, Pfeiffer teaches program means for defining a plurality of section (66).

As per claim 3, Pfeiffer teaches program means for defining sections of the image reproduction device .... and program means

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for mapping pixels of the image data .... (66, 68, 72, 82).

As per claims 4 and 5, Pfeiffer teaches means for decimating and cropping the image data (column 7, line 11 to column 12, line 63).

As per claim 6, Pfeiffer teaches program means for controllably generating border image signals .... (22).

As per claims 7-10, Bauneister teaches program means for controllably reading image data files ....., for loading image data .... for arranging the image data files ....; for reading other image data ....; and for displaying a first and second image ....; for compiling the image data .... (Fig. 1).

Claims 11-16 are rejected under similar rationale with respect to claims 1-5 above.

As per claim 17, Pfeiffer teaches means for rotate (column 6, lines 24-29).

Claim 18 is rejected under similar rationale with respect to claims 8-10 above.

Claims 19-21 are rejected under similar rationale with respect to claims 11-14 above.

As per claims 22-24, Pfeiffer teaches the step of manipulating .... (72; column 11, lines 52-68).

Claims 25-26 are rejected under similar rationale with respect to claims 4-5 above.

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As per claims 27 and 29, Pfeiffer teaches zooming and panning the image (column 6, lines 24-29).

Claims 31-32 are rejected under similar rationale with respect to claims 17-18 above.

As per claim 33, Baumeister teaches a remote control device (6) and means for causing a plurality of digitized images to be accessed .... (7A).

Claims 34-35 are rejected under similar rationale with respect to claims 1 and 3 above.

Claim 36 is rejected under similar rationale with respect to claim 33 above.

7. Claims 28 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hayashi et al. (4,947,344) teaches a method of rotating image data in a partitioned display buffer.

Inda (4,554,638) teaches a display device including apparatus for rotating the image to be displayed.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kee Tung whose telephone number is (703) 308-2898.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

KT/dah  
January 21, 1993

Km7

  
DALE M. SHAW  
SUPERVISORY PATENT EXAMINER  
GROUP 230